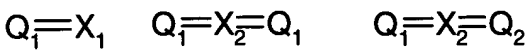
Remarks

Claims 1-15 are pending, while claims 3-15 have been withdrawn from consideration pursuant to a restriction requirement and an election of species. Claim 2 has been amended to incorporate subject matter otherwise incorporated by reference. The amendment does not introduce new patentable features or require a new search. The amendment is meant to clarify the subject matter. For this reason, Applicants submit that good cause exists to enter the amendments even though presented after final rejection.

The Examiner rejects claims 1 and 2 under 35 U.S.C. 103 as being unpatentable over the compounds shown in published European Patent Application 632,102 ("EP '102"). The Examiner refers to compound 15 (after speaking with the Examiner - meaning the compound shown on page 42, line 15). Applicants respectfully traverse this rejection.

Claim 1 is drawn to compounds of formulae (Ia), (Ib) or (Ic)

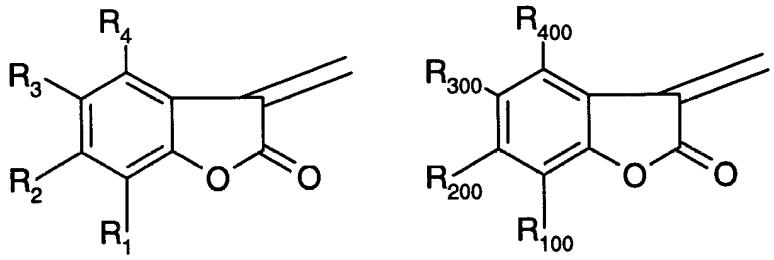


(Ia) (Ib) (Ic)

in which

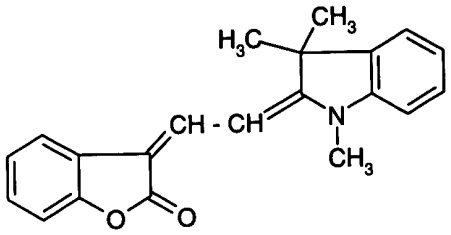
Q_1 is a benzofuran-2-one of the formula (IIa), and

Q_2 is a benzofuran-2-one of the formula (IIb)



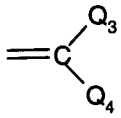
(IIa) (IIb)

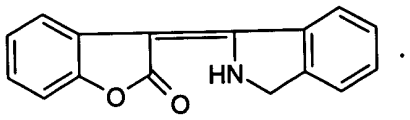
The compound from EP '102 is represented by the formula



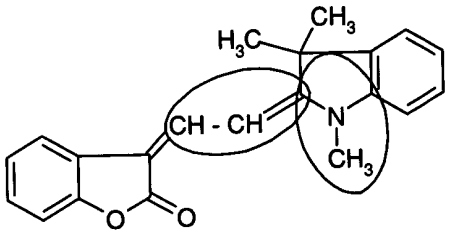
The prior art compound differs from the instantly claimed compounds of formula (Ia), (Ib) and (Ic) as follows:

a) with respect to formula (Ia):

The closest structural possibility occurs for X_1 being a methylene radical  , wherein Q_3 and Q_4 are together an isoindoline radical. In such a case, the resulting compound would be of formula



From such point, there are two relevant structural differences:



The prior art compound has an indolone moiety instead of an <u>iso</u>indolone and a bridge =CH-CH= instead of a direct bond between the benzofuran and isoindolon component.

The inventive compounds of formulas (Ib) and (Ic) bear <u>two</u> benzofuran-2-one radicals and therefore are both structurally further away from the compound of EP '102. There is no teaching, which would lead or motivate one skilled in the art to modify the compound on page 42, line 15 to arrive at the inventive compounds. Withdrawal of the grounds of rejection and passage of this application to issue is therefore earnestly solicited.

Applicants submit that the instant application is now in condition for allowance. In the event that minor amendments will further prosecution, Applicants request that the Examiner contact the undersigned representative.

Respectfully submitted,

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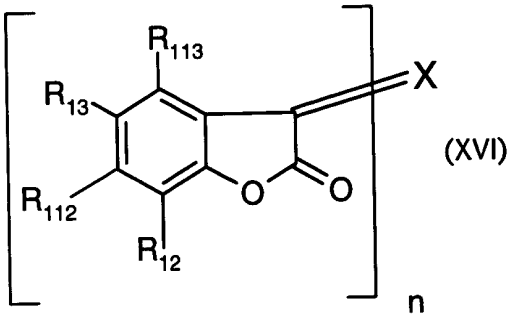
Amended Claims with underlining and bracketing

2. (Twice amended) A compound according to claim 1 of the formula (XVI)



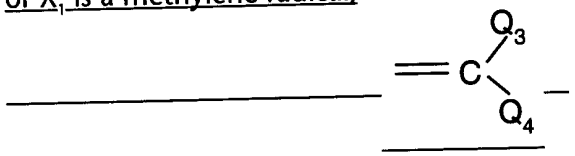
(XVI)

in which

n is 1 or 2, and

if n is 1

X is [X_1 as defined in claim 1,] a hydrazone or imine radical, with the proviso that, if R_{12}, R_{13}, R_{112} and R_{113} are hydrogen, or at least one R_{12}, R_{13}, R_{112} or R_{113} is methyl, the hydrazone radical is excluded, or, if R_{12}, R_{13}, R_{112} or R_{113} is hydrogen, X_1 is not phenylimine- or 4-dimethylamine-phenylimine, or X_1 is a methylene radical,



in which

Q_3 is a primary or secondary amine radical and Q_4 is hydrogen or C_1-C_{24}alkyl, -CO-(C_1-C_{24}alkyl), -CO-O-(C_1-C_{24}alkyl), C_1-C_{24}alkoxy, C_1-C_{24}alkylthio, C_5-C_{12}cycloalkyl, C_5-C_{12}cycloalkoxy, C_5-C_{12}cycloalkylthio, C_2-C_{24} alkenyl, C_6-C_{24}aryl, -CO-O-(C_6-C_{24}aryl), -CO-(C_6-C_{24}aryl), C_6-C_{24}aryloxy, a primary or secondary amine radical, C_6-C_{12}arylthio, C_7-C_{25}aralkyl, thienyl, benzothienyl, dibenzothienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiinyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indolizinyl, isoindolyl, indolyl, indazolyl, purinyl, quinolizinyl, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, carbazolyl, carbolinyl, benzotriazolyl, benzoxazolyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl or phenoxazinyl O-thienyl, O-benzothienyl, O-dibenzothienyl, O-thianthrenyl, O-furyl, O-furfuryl, O-2H-pyranyl, O-benzofuranyl, O-isobenzofuranyl, O-benzimidazolyl, O-benzothiazolyl, O-dibenzofuranyl, O-phenoxythiinyl, O-pyrrolyl, O-imidazolyl, O-pyrazolyl, O-pyridyl, O-bipyridyl, O-triazinyl, O-pyrimidinyl, O-pyrazinyl, O-pyridazinyl, O-indolizinyl, O-isoindolyl, O-indolyl, O-indazolyl, O-purinyl, O-quinolizinyl, O-quinolyl, O-isoquinolyl, O-

phthalazinyl, O-naphthyridinyl, O-quinoxalinyl, O-quinazolinyl, O-cinnolinyl, O-pteridinyl, O-carbazolyl, O-carbolinyl, O-benzotriazolyl, O-benzoxazolyl, O-phenanthridinyl, O-acridinyl, O-perimidinyl, O-phenanthrolinyl, O-phenazinyl, O-isothiazolyl, O-phenothiazinyl, O-isoxazolyl, O-furazanyl or O-phenoxazinyl S-thienyl, S-benzothienyl, S-dibenzothienyl, S-thianthrenyl, S-furyl, S-furfuryl, S-2H-pyranyl, S-benzofuranyl, S-isobenzofuranyl, S-benzimidazolyl, S-benzothiazolyl, S-dibenzofuranyl, S-phenoxythiinyl, S-pyrrolyl, S-imidazolyl, S-pyrazolyl, S-pyridyl, S-bipyridyl, S-triazinyl, S-pyrimidinyl, S-pyrazinyl, S-pyridazinyl, S-indolizinyl, S-isoindolyl, S-indolyl, S-indazolyl, S-purinyl, S-quinolizinyl, S-quinolyl, S-isoquinolyl, S-phthalazinyl, S-naphthyridinyl, S-quinoxalinyl, S-quinazolinyl, S-cinnolinyl, S-pteridinyl, S-carbazolyl, S-carbolinyl, S-benzotriazolyl, S-benzoxazolyl, S-phenanthridinyl, S-acridinyl, S-perimidinyl, S-phenanthrolinyl, S-phenazinyl, S-isothiazolyl, S-phenothiazinyl, S-isoxazolyl, S-furazanyl or S-phenoxazinyl,

or

Q_3 and Q_4 together are a lactam, quinomethylene, hydantoin, acenaphthenequinone, azlactone, pyrazolonyl, barbituric acid, isoindolinone or isoindoline radical,

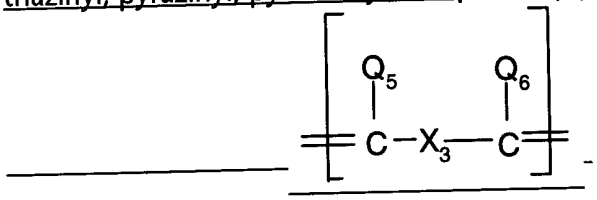
with the proviso that

Q_4 is not hydrogen and Q_3 is not a primary or secondary amine radical if R_{13} is hydrogen, methoxy or hydroxyl and R_{12}, R_{112} and R_{113} are hydrogen,

and

if n is 2

X is [X_2 as defined in claim 1,] thienyl, furyl, 2H-pyranyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, triazinyl, pyrazinyl, pyridazinyl, morpholin, piperidyl, piperazinyl, or is



in which

X_3 is a single bond, C_6-C_{24}arylene, thienylene, benzothienylene, dibenzothienylene, thianthrenylene, furylene, furfurylene, 2H-pyranylene, benzofuranylene, isobenzofuranylene, dibenzofuranylene, phenoxythinylene, pyrrolylene, imidazolylene, pyrazolylene, pyridylene, bipyridylene, benzimidazolylene, benzothiazolylene, triazinylene, pyrimidinylene, pyrazinylene, pyridazinylene, indolizinylene, isoindolylene, indolylene, indazolylene, purinylene, quinolizinylene, quinolylene, isoquinolylene, phthalazinylene, naphthyridinylene, quinoxalinylene, quinazolinylene, cinnolinylene, pteridinylene, carbazolylene, carbolinylene, benzotriazolylene, benzoxazolylene, phenanthridinylene, acridinylene, perimidinylene, phenanthrolinylene, phenazinylene, isothiazolylene, phenothiazinylene, isoxazolylene, furazanylene or phenoxazinylene 1,2-phenylene, 1,3-phenylene, 1,4-phenylene or naphthylene, or a tetravalent polyether, polyimine, polyamine radical, or

bi(C_6-C_{24})arylene, bipyridylene, bipyrrolylen, piperazinedionylen, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen, C_2-C_{24}alkenylene, in which bi(C_6-C_{24})arylene, bipyridylene, bipyrrolylen, piperazinedionylen, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen or C_2-C_{24}alkenylene are optionally interrupted by one or more intermediate units selected from the group consisting of -CH=CH-, -CH=N-, -N=N-, -$CR_{44}R_{42}$-, -CO-, -COO-, -OCO-, -NR_{42}CO-, -$CONR_{42}$-, -O-, -S-, -SO-, -SO_2- or -NR_{42}-,

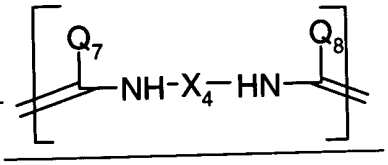
in which

R_{42} and R_{44} independently of one another are hydrogen, C_1-C_{24}alkyl, C_5-C_{12}cycloalkyl, C_2-C_{24} alkenyl, C_6-C_{24}aryl, C_7-C_{25}aralkyl, thienyl, benzothienyl, dibenzothienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiinyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indolizinyl, isoindolyl, indolyl, indazolyl, purinyl, quinolizinyl, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, carbazolyl, carbolinyl, benzotriazolyl, benzoxazolyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl or phenoxazinyl,

with the proviso that if R_{12}, R_{13}, R_{112} or R_{113} are all tert-butyl or all hydrogen, Q_5 and Q_6 are hydrogen, X_3 is not 1,4-phenylene, and Q_5 and Q_6 independently of one another are hydrogen, C_6-C_{24}aryl, C_6-C_{24}aryloxy, C_1-C_{24}alkyl, C_1-C_{24} alkoxy, C_1-C_{24}alkylthio, C_5-C_{12}cycloalkyl, C_5-C_{12}cycloalkoxy, C_5-C_{12}cycloalkylthio, C_2-C_{24}alkenyl, C_6-C_{24}aryl, C_6-C_{24}aryloxy, C_6-C_{24}arylthio, thienyl, benzothienyl, dibenzothienyl, thianthrenyl, furyl, furfuryl, 2H-pyranyl, benzofuranyl, isobenzofuranyl, benzimidazolyl, benzothiazolyl, dibenzofuranyl, phenoxythiinyl, pyrrolyl, imidazolyl, pyrazolyl, pyridyl, bipyridyl, triazinyl, pyrimidinyl, pyrazinyl, pyridazinyl, indolizinyl, isoindolyl, indolyl, indazolyl, purinyl, quinolizinyl, quinolyl, isoquinolyl, phthalazinyl, naphthyridinyl, quinoxalinyl, quinazolinyl, cinnolinyl, pteridinyl, carbazolyl, carbolinyl, benzotriazolyl, benzoxazolyl, phenanthridinyl, acridinyl, perimidinyl, phenanthrolinyl, phenazinyl, isothiazolyl, phenothiazinyl, isoxazolyl, furazanyl or phenoxazinyl O-thienyl, O-benzothienyl, O-dibenzothienyl, O-thianthrenyl, O-furyl, O-furfuryl, O-2H-pyranyl, O-benzofuranyl, O-isobenzofuranyl, O-benzimidazolyl, O-benzothiazolyl, O-dibenzofuranyl, O-phenoxythiinyl, O-pyrrolyl, O-imidazoyl, O-pyrazolyl, O-pyridyl, O-bipyridyl, O-triazinyl, O-pyrimidinyl, O-pyrazinyl, O-pyridazinyl, O-indolizinyl, O-isoindolyl, O-indolyl, O-indazolyl, O-purinyl, O-quinolizinyl, O-quinolyl, O-isoquinolyl, O-phthalazinyl, O-naphthyridinyl, O-quinoxalinyl, O-quinazolinyl, O-cinnolinyl, O-pteridinyl, O-carbazolyl, O-carbolinyl, O-benzotriazolyl, O-benzoxazolyl, O-phenanthridinyl, O-acridinyl, O-perimidinyl, O-phenanthrolinyl, O-phenazinyl, O-isothiazolyl, O-phenothiazinyl, O-isoxazolyl, O-furazanyl or O-phenoxazinyl S-thienyl, S-benzothienyl, S-dibenzothienyl, S-thianthrenyl, S-furyl, S-furfuryl, S-2H-pyranyl, S-benzofuranyl, S-isobenzofuranyl, S-benzimidazolyl, S-benzothiazolyl, S-dibenzofuranyl, S-phenoxythiinyl, S-pyrrolyl, S-imidazolyl, S-pyrazolyl, S-pyridyl, S-bipyridyl, S-

triazinyl, S-pyrimidinyl, S-pyrazinyl, S-pyridazinyl, S-indolizinyl, S-isoindolyl, S-indolyl, S-indazolyl, S-purinyl, S-quinolizinyl, S-quinolyl, S-isoquinolyl, S-phthalazinyl, S-naphthyridinyl, S-quinoxalinyl, S-quinazolinyl, S-cinnolinyl, S-pteridinyl, S-carbazolyl, S-carbolinyl, S-benzotriazolyl, S-benzoxazolyl, S-phenanthridinyl, S-acridinyl, S-perimidinyl, S-phenanthrolinyl, S-phenazinyl, S-isothiazolyl, S-phenothiazinyl, S-isoxazolyl, S-furazanyl or S-phenoxazinyl,

or

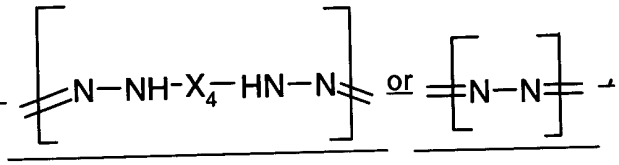
X_2 is 

in which

Q_7 and Q_8 independently of one another are Q_5 or Q_6, and

X_4 is C_6-C_{24}arylene, A_5-A_{18}heteroarylene,a polymethylidene or divalent polyether, polyimine, polyamine radical, or bi(C_6-C_{24})arylene, bipyridylene, bipyrrolylen, piperazinedionylen, quinodimethylene, imidazolonylen, isoindolinylen, and anthraxquinoylfuranoylen C_2-C_{24}alkenylene, in which bi(C_6-C_{24})arylene, bipyridylene, bipyrrolylen, piperazinedionylen, quinodimethylene, imidazolonylen, isoindolinylen, and anthraquinoylfuranoylen or C_2-C_{24}alkenylene are optionally interrupted by one or more intermediate units selected from the group consisting of -CH=CH-, -CH=N-, -N=N-, -$CR_{44}R_{42}$-, -CO-, -COO-, -OCO-, -NR_{42}CO-, -$CONR_{42}$-, -O-, -S-, -SO-, -SO_2- or -NR_{42}-,

or

X_2 is 

and

R_{12}, R_{112}, R_{13} and R_{113} independently of one another are hydrogen, halogen, OH, NO_2, R_{14}, OR_{14}, OC_9-C_{18}alkyl or SC_9-C_{18}alkyl, in which

R_{14} is C_1-C_{24}alkyl which is unsubstituted or substituted one or more times by oxo or by $COO^-X_5^+$ and which is uninterrupted or interrupted one or more times by O, N and/or S, or is C_7-C_{18}aralkyl or C_6-C_{12}aryl unsubstituted or substituted one or more times by halogen, OR_{16}, $NR_{16}R_{17}$, $COOR_{16}$, $CONR_{16}R_{17}$, $NR_{18}COR_{16}$ or $NR_{18}COOR_{16}$,

X_5^+ is a cation H^+, Na^+, K^+, $Mg^{++}{}_{1/2}$, $Ca^{++}{}_{1/2}$, $Zn^{++}{}_{1/2}$, $Al^{+++}{}_{1/3}$, or $(NR_{16}R_{17}R_{18}R_{19})^+$, and

R_{16} and R_{17} independently of one another are hydrogen, C_6-C_{12}aryl, C_7-C_{10}aralkyl, or C_1-C_8alkyl which is unsubstituted or substituted one or more times by halogen, hydroxyl or C_1-C_4alkoxy, or

R_{16} and R_{17} in $NR_{16}R_{17}$ or $CONR_{16}R_{17}$, together with the nitrogen atom connecting them, are pyrrolidine, piperidine, piperazine or morpholine each of which is unsubstituted or substituted from one to four times by C_1-C_4alkyl,

and

R_{18} and R_{19} independently of one another are hydrogen, C_1-C_8alkyl, C_6-C_{10}aryl or C_6-C_{12}aralkyl, or R_{12} and R_{112}, R_{112} and R_{13}, R_{13} and R_{113} independently of one another are each together divalent radicals, such as polycyclic radicals.